

Additional file 1. Description of the quantitative physical, biological and chemical parameters recorded for the open water collections in 45 studied areas in Dakar in October-September 2007 and between July 2008 and April 2010, depending on breeding status.

Parameters	Anopheline larvae and pupae absent	Anopheline larvae and pupae present
Continuous variables	Number of observations	Number of observations
	Range	Range
	Mean and 95% Confidence Interval	Mean and 95% Confidence Interval
Surface (m ²)	1014 0.01 - 30550 1861 [1613 - 2109]	1657 0.01 - 50662 2190 [1797 - 2583]
Water temperature (°C)	1 430 18.7 - 42.3 29.0 [28.8 - 29.2]	857 19.1 - 41.2 30.7 [30.5 - 31.0]
Turbidity (from 0: clear, to 26: turbid)	1597 0 - 26 9.8 [9.3 - 10.3]	979 0 - 26 11.9 [11.2 - 12.5]
pH	1609 4.2 - 10.1 7.6 [7.6 - 7.7]	985 4.4 - 11.3 8.1 [8.1 - 8.2]
Conductivity (not recorded in 2007)	935 0.02 - 20.00 3.00 [2.78 - 3.21]	559 0.04 - 20.00 3.03 [2.74 - 3.32]
Shade (%)	1664 0 - 100 30.4 [28.8 - 32.0]	1012 0 - 100 19.4 [17.6 - 21.2]
Surface vegetation (%)	1638 0 - 100 34.0 [32.1 - 35.9]	1013 0 - 100 27.7 [25.7 - 29.6]
Number of continuous decades of water persistence	502 1 - 10 2.7 [2.5 - 2.9]	577 1 - 9 3.4 [3.3 - 3.6]

Parameters	Anopheline larvae and pupae absent	Anopheline larvae and pupae present
Categorical variables	Number of observations (row %)	Number of observations (row %)
Presence of <i>Culicinae</i> larvae		
No	1376 (76.2%)	430 (23.8%)
Yes	284 (33.5%)	563 (66.5%)
Presence of any predator, including larvivorous fishes		
No	665 (66.2%)	340 (33.8%)
Yes	819 (60.0%)	546 (40.0%)
Presence of larvivorous fishes		
No	1037 (56.2%)	808 (43.8%)
Yes	445 (85.4%)	76 (14.6%)
Season		
Dry (Nov to Jun)	575 (78.4%)	185 (21.6%)
Wet (Jul to Oct)	1093 (56.1%)	857 (43.9%)
Studied year		
Jul 2008 - Jun 2009	658 (59.2%)	453 (40.8%)
Jul 2009 - Jun 2010	826 (65.6%)	433 (34.4%)
Persistence of water collection		
Temporary	772 (49.9%)	776 (50.1%)
Permanent	896 (78.9%)	239 (21.1%)
Type of water collection		
Canal	58 (63.7%)	33 (36.3%)
Ditch or puddle	496 (48.1%)	535 (51.9%)
Lake, pond, marshland	255 (61.7%)	158 (38.3%)
Well or basin	793 (80.4%)	193 (19.6%)
Small containers	11 (44.0%)	14 (56%)
Hole	55 (40.1%)	82 (59.9%)
Type of water collection (puddle vs others)		
Ditch or puddle	496 (48.1%)	535 (51.9%)
Other	1172 (70.9%)	480 (29.1%)

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Categorical variables		Number of observations (row %)	Number of observations (row %)
Muddy bottom			
	No	1423 (67.9%)	674 (32.1%)
	Yes	238 (41.2%)	340 (58.8%)
Water collection located in market-garden			
	No	944 (51.3%)	896 (48.7%)
	Yes	724 (85.9%)	119 (14.1%)
Water collection located in highly urbanized area			
	No	1601 (61.4%)	1008 (38.6%)
	Yes	67 (90.5%)	7 (9.5%)

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Categorical variables	Number of observations (row %)	Number of observations (row %)
Studied area		
Almadies	26 (25.7%)	75 (74.3%)
BA Ouakam	19 (29.2%)	46 (70.8%)
BA160	40 (71.4%)	16 (28.6%)
BIMA	13 (48.1%)	14 (51.9%)
Bourguiba	26 (92.9%)	2 (7.1%)
Cafetériat	17 (38.6%)	27 (61.4%)
Cambérène	11 (78.6%)	3 (21.4%)
Dalifort	119 (79.9%)	30 (20.1%)
Dial Diop	49 (41.2%)	70 (58.8%)
Fana	24 (44.4%)	30 (55.6%)
Gibraltar	6 (33.3%)	12 (66.7%)
Golf	155 (66.8%)	77 (33.2%)
Grand Médine	10 (66.7%)	5 (33.3%)
Grand Yoff	3 (100.0%)	0 (0.0%)
Hann (IRD)	37 (46.2%)	43 (53.8%)
HLM	1 (100.0%)	0 (0.0%)
Karack	35 (46.1%)	41 (53.9%)
Liberté 5	9 (69.2%)	4 (30.8%)
Liberté 6 Extension	25 (78.1%)	7 (21.9%)
Mamelles	8 (34.8%)	15 (62.2%)
Maristes	62 (87.3%)	9 (12.7%)
Nord Foire	2 (100.0%)	0 (0.0%)
Ouest Foire	37 (29.8%)	87 (70.2%)
Patte d'Oie (1)	72 (83.7%)	14 (16.3%)
Patte d'Oie (2)	95 (83.3%)	19 (16.7%)
Pikine	174 (72.5%)	66 (27.5%)
Pikine Est	5 (83.3%)	1 (16.7%)
Point E	9 (100.0%)	0 (0.0%)
Pointe des Almadies	33 (64.7%)	18 (35.3%)
Potou	36 (59.0%)	25 (41.0%)
Réservoir	80 (70.2%)	34 (29.8%)
Roi Baudoin	37 (88.1%)	5 (11.9%)
Sacré Cœur	16 (41.0%)	23 (59.0%)
Sandial	0	0
Thiaroye Mairie	90 (75.6%)	29 (24.4%)
Touba Thiaroye	17 (73.9%)	6 (26.1%)
Université	16 (29.1%)	39 (70.9%)
Virage	25 (65.8%)	13 (34.2%)
Yarakh	191 (87.6%)	27 (12.4%)
Zone A	38 (31.4%)	83 (68.6%)